IN THE CLAIMS:

1. (currently amended) A method for filtering images comprising:

obtaining an image; and

obtaining a final pixel value by performing a filtering operation on an initial pixel value of at least one pixel of the image and by modulating the filtering operation with a gain factor that is ~~a function of~~ based on a gain factor curve and a relative pixel value ~~which is~~, the relative pixel value calculated based on a threshold value T.

2. (original) A method in accordance with Claim 1 wherein obtaining the final pixel value comprises obtaining the final pixel value by using

$P_f(i,j) = P(i,j) - (P(i,j) - decon(P(i,j))) * Gain(i,j)$, wherein $P(i,j)$ is the initial pixel value, $decon(P(i,j))$ is a deconvolution operation performed on the initial pixel value, $Gain(i,j)$ is the gain factor of the pixel, and (i,j) is the pixel.

3. (original) A method in accordance with Claim 1 further comprising categorizing the image into at least two regions of low, medium, and high density.

4. (previously presented) A method in accordance with Claim 3 wherein modulating the filtering operation comprises:

performing a smoothing operation on one of the regions; and

limiting the smoothing operation to the one region.

5. (previously presented) A method in accordance with Claim 4 further comprising:

determining the threshold value T based on a predetermined value.

6. (currently amended) A method in accordance with Claim 5 further comprising:

generating [[a]] the gain factor curve as a function of the relative pixel value of each pixel of the image.

7. (original) A method in accordance with Claim 6 further comprising:

calculating an effective pixel value from the initial pixel value by using

$(P_e(i,j) = (P(i,j)+P(i-1,j)+P(i+1,j)+P(i,j-1)+P(i,j+1))/5$, wherein $P_e(i,j)$ is the effective pixel value, and $P(i-1, j)$, $P(i+1, j)$, $P(i, j-1)$, and $P(i, j+1)$ are pixel values of pixels that are adjoining the pixel with pixel value $P(i,j)$.

8. (original) A method in accordance with Claim 7 further comprising

calculating the relative pixel value $P_r(i,j)$ from the effective pixel value by using $P_r(i,j) = P_e(i,j)/T$.

9. (original) A method in accordance with Claim 8 further comprising

calculating the gain factor of the pixel by using

$$Gain\ (i, j) = -0.35 + 0.1 * P_r(i, j) + 0.15 * P_r(i, j)^2 + 0.2 * P_r(i, j)^3 + 0.4 * P_r(i, j)^4 + 0.5 * P_r(i, j)^5$$

wherein $Gain(i,j)$ is the gain factor, and wherein $Gain(i,j)$ has positive and negative values.

10. (currently amended) A method for filtering images comprising:

obtaining a computed tomography (CT) image; and

obtaining a final pixel value by performing a filtering operation on an initial pixel value of at least one pixel of the CT image and by modulating the filtering operation with a gain factor that is ~~a function of~~ based on a gain factor curve and a relative pixel value ~~which is~~, the relative pixel value calculated based on a threshold value T.

11. (currently amended) A computer-readable medium encoded with a program configured to:

obtain an image; and

obtain a final pixel value by performing a filtering operation on an initial pixel value of at least one pixel of the image and by modulating the filtering operation with a gain factor

that is ~~a function of~~ based on a gain factor curve and a relative pixel value ~~which is~~, the relative pixel value calculated based on a threshold value T.

12. (original) A computer-readable medium in accordance with Claim 11 wherein to obtain the final pixel value the program configured to obtain the final pixel value by using $P_f(i,j) = P(i,j) - (P(i,j) - decon(P(i,j))) * Gain(i,j)$, wherein $P(i,j)$ is the initial pixel value, $decon(P(i,j))$ is a deconvolution operation performed on the initial pixel value, $Gain(i,j)$ is the gain factor of the pixel, and (i,j) is the pixel.

13. (original) A computer-readable medium in accordance with Claim 11 wherein the program is further configured to categorize the image into at least two regions of low, medium, and high density.

14. (previously presented) A computer-readable medium in accordance with Claim 13 wherein to modulate the filtering operation the program configured to:

perform a smoothing operation on one of the regions; and

limit the smoothing operation to the one region.

15. (previously presented) A computer-readable medium in accordance with Claim 14 wherein the program is further configured to determine the threshold value T based on a predetermined value.

16. (currently amended) A computer-readable medium in accordance with Claim 15 wherein the program is further configured to generate [[a]] the gain factor curve as a function of the relative pixel value of each pixel of the image.

17. (original) A computer-readable medium in accordance with Claim 16 wherein the program is further configured to:

calculate an effective pixel value from the initial pixel value by using $(P_e(i,j) = (P(i,j)+P(i-1,j)+P(i+1,j)+P(i,j-1)+P(i,j+1))/5$, $P_e(i,j)$ being the effective pixel value, and $P(i-1, j)$, $P(i+1, j)$, $P(i, j-1)$, and $P(i, j+1)$ being pixel values of pixels that are adjoining the pixel with pixel value $P(i,j)$.

18. (original) A computer-readable medium in accordance with Claim 17 wherein the program is further configured to:

calculate the relative pixel value $P_r(i,j)$ from the effective pixel value by using $P_r(i,j)=P_e(i,j)/T$.

19. (original) A computer-readable medium in accordance with Claim 18 wherein the program is further configured to calculate the gain factor for the pixel by using

$$Gain\ (i,j) = -0.35 + 0.1 * P_r(i,j) + 0.15 * P_r(i,j)^2 + 0.2 * P_r(i,j)^3 + 0.4 * P_r(i,j)^4 + 0.5 * P_r(i,j)^5$$

wherein $Gain(i,j)$ is the gain factor.

20. (currently amended) A computer configured to:

obtain an image; and

obtain a final pixel value by performing a filtering operation on an initial pixel value of at least one pixel of the image and by modulating the filtering operation with a gain factor that is ~~a function of~~ based on a gain factor curve and a relative pixel value ~~which is~~, the relative pixel value calculated based on a threshold value ***T***.

21. (currently amended) A computed tomographic (CT) imaging system for filtering CT images, the imaging system comprising:

a detector array having a plurality of detectors;

an x-ray source positioned to emit x-rays toward the detector array; and

a processor operationally coupled to the detector array, the processor configured to:

obtain an image; and

obtain a final pixel value by performing a filtering operation on an initial pixel value of at least one pixel of the image and by modulating the filtering operation with a gain factor that is ~~a function of~~ based on a gain factor curve and a relative pixel value ~~which is~~, the relative pixel value calculated based on a threshold value ***T***.

22. (original) A CT system in accordance with Claim 21 wherein to obtain the final pixel value the processor configured to obtain the final pixel value by using $P_f(i,j) = P(i,j) - (P(i,j) - decon(P(i,j))) * Gain(i,j)$, wherein $P(i,j)$ is the initial pixel value, $decon(P(i,j))$ is a deconvolution operation performed on the initial pixel value, $Gain(i,j)$ is the gain factor of the pixel, and (i,j) is the pixel.

23. (original) A CT system in accordance with Claim 21 wherein the processor is further configured to categorize the image into at least two regions of low, medium, and high density.

24. (previously presented) A CT system in accordance with Claim 23 wherein to modulate the filtering operation the processor configured to:

perform a smoothing operation on one of the regions; and

limit the smoothing operation to the one region.

25. (canceled)

26. (new) A CT system in accordance with Claim 21 wherein the processor is further configured to determine the initial pixel value and the relative pixel value based on a Hounsfield number corresponding to the at least one pixel.